

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: David E. Huddleston, et al.  
Serial No. 10/762,090  
Filing Date: January 20, 2004  
Examiner: Albert W. Paladini  
Art Unit: 2125  
Confirmation No.: 4604  
Title: **METHOD AND APPARATUS FOR DISCOVERING  
EVOLUTIONARY CHANGES WITHIN A SYSTEM**

**Mail Stop AF**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

The following Pre-Appeal Brief Request for Review ("Request") is being filed in accordance with the provisions set forth in the Official Gazette Notice of July 12, 2005 ("OG Notice"). Pursuant to the OG Notice, this Request is being filed concurrently with a Notice of Appeal. Applicants respectfully request reconsideration of the application in light of the remarks set forth below.

**REMARKS**

Applicants contend that the rejections of Claims 1 through 15 contain clear legal and factual deficiencies, as described below. In a Final Office Action mailed February 26, 2007 (the "Final Office Action") Claims 1-15 were rejected under 35 U.S.C. § 101. Applicants request a finding that these rejections are improper and allowance of all pending claims.

**Rejections under 35 U.S.C. § 101**

The Examiner rejects claims 1-15 under 35 U.S.C. § 101 as being directed to non-statutory subject matter (Office Action, Page 2). Applicants respectfully disagree.

First, the patent laws define patentable subject matter as "any new and useful process, machine, manufacture or composition of matter, or any new and useful improvement thereto." *See* 35 U.S.C. § 101. When an abstract idea is reduced to a practical application, the abstract idea no longer stands alone if the practical application of the abstract idea produces a useful, concrete, and tangible result. This then satisfies the requirements of 35 U.S.C. § 101. *See In re Alappat*, 33 F.3d 1526, 1544, 31 U.S.P.Q.2d 1545, 1557 (Fed. Cir. 1994); *see also State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373, 47 U.S.P.Q.2d 1596, 1601-02 (Fed. Cir. 1998). While an abstract idea by itself may not satisfy the requirements of 35 U.S.C. § 101, an abstract idea when practically applied to produce a useful, concrete, and tangible result satisfies 35 U.S.C. § 101. *See AT&T Corp. v. Excel Comm. Inc.*, 172 F.3d 1352, 1357, 50 U.S.P.Q. 1447, 1452 (Fed. Cir. 1999) (stating that as technology progressed, the CCPA overturned some of the earlier limiting principles regarding 35 U.S.C. § 101 and announced more expansive principles formulated with computer technology in mind); *see also In re Musgrave*, 431 F.2d 882, 167 U.S.P.Q. 280 (CCPA 1970) (cited by the Federal Circuit in *AT&T Corp.*, 172 F.3d at 1356). Thus, producing a useful, concrete, and tangible result is the key to patentability according to *State Street* and other applicable case law.

"Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101." M.P.E.P. § 2106. Indeed, a method or process remains statutory even if some or all of the steps therein can be performed in the human mind, with the aid of the human mind, or because it may be necessary for one

performing the method or process to think. *See In re Musgrave*, 431 F.2d at 893, 167 U.S.P.Q. at 289. As stated by the Federal Circuit in *State Street* and as explicitly confirmed in the M.P.E.P., “[T]ransformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces ‘a useful, concrete, and tangible result’ -- a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.” *State Street*, 149 F.3d at 1373, 47 U.S.P.Q.2d at 1601-02; M.P.E.P. § 2106. As discussed below, Applicants’ Claims 1-15 clearly recite a useful, concrete, and tangible result and are therefore directed to patentable subject matter.

As an example, Claim 1 is directed to an adaptive system modeling method in which a set of input features and a superset of the input features and other features are selected from a plurality of candidate features of a system. A system model is generated by using data corresponding to the selected input feature set. Moreover, online data corresponding to the superset of the input features and other features collected from the system are maintained.

Applicant respectfully contends that, at a minimum, the limitations “generating a system model” and “maintaining online data” are useful, concrete and tangible results of Claim 1. For at least these reasons, Applicant respectfully requests the withdrawal of the rejection of Claim 1 under 35 U. S. C. § 101.

Similar to Claim 1, each of Claims 3 and 6 include limitations generally directed to “generating a system model.” As discussed above with regard to Claim 1, Applicant respectfully contends that this represents a useful, concrete and tangible result. For at least these reasons, Applicant respectfully requests the withdrawal of the rejections of Claims 3 and 6 under 35 U. S. C. 101.

Claims 2, 4 and 5 depend from Claims 1 or 3. Therefore, Applicant respectfully requests the withdrawal of the rejections of Claims 2, 4 and 5 under 35 U. S. C. § 101 for at least those reasons discussed above with regard to their respective base claims.

Claims 7, 8 and 9 are directed to a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform the method of Claims 1, 3 or 6. Therefore, Applicant respectfully requests the withdrawal of the rejections of Claims 7, 8, and 9 under 35 U. S. C. § 101 , for at least those reasons discussed above with regard to Claims 3 and 6.

Claims 10, 11 and 12 are directed to a computer system that include *inter alia*, a program storage device tangibly embodying a program of instructions executable by a computer to perform the method of Claims 1, 3 or 6. Therefore, Applicants respectfully request the withdrawal of the rejections of Claims 10, 11 and 12 under 35 U. S. C. § 101 for at least those reasons discussed above with regard to Claims 3 and 6.

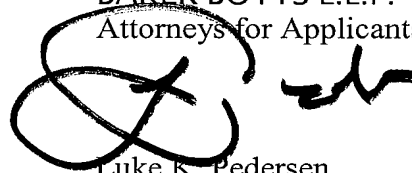
Claims 13, 14 and 15 are directed to a data signal embodied in a transmission medium which embodies instructions to perform the method of Claims 1, 3 or 6. Therefore, Applicant respectfully requests the withdrawal of the rejections of Claims 13, 14 and 15 under 35 U. S. C. § 101 for at least those reasons discussed above with regard to Claims 3 and 6.

CONCLUSION

As the rejections of Claims 1-15 contain clear legal and factual deficiencies, Applicant respectfully requests that the rejections of these claims be withdrawn and that Claims 1-15 be allowed. To the extent necessary, the Commissioner is hereby authorized to charge any required fees or credit any overpayments to Deposit Account No. **02-0384** of **Baker Botts L.L.P.**

Respectfully submitted,

BAKER BOTTS L.L.P.  
Attorneys for Applicants

A handwritten signature in black ink, appearing to be 'L. Pedersen', is written over the printed name.

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Date: May 29, 2007

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